

Serial No. 10/531,141

Docket No. 1001/0166PUS1

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REMARKS/ARGUMENTS

Favorable reconsideration an allowance of the subject application are respectfully requested. Claims 2-8, 13-17, and 24-40 are pending in this application, with claims 16, 17, and 32 being independent. Claims 26-40 have been added and claims 22 and 23 are canceled.

Claim Rejections

Claims 2-7, 13, 14, 16, 17 and 22-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pritchard et al. (US 5,479,050) in view of Kwon et al. (US 5,365,409). Claims 8 and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pritchard et al. in view of Kwon et al. and further in view of Carter Jr. et al. (US 6,365,976). These rejections are respectfully traversed.

Claim 16 is amended to recite, in a particular arrangement with other features:

a plurality of stamped pedestals arranged on a metal layer
extending in a device plane

...

wherein at least one of said stamped pedestals includes a sidewall having a face extending, upward from the device plane, from a pedestal base junction extending along a closed path on the device plane, to a pedestal top surface spaced a pedestal height above the device plane, the sidewall being continuous, at all points of the pedestal base junction, from the pedestal base junction to the pedestal top surface (emphasis added)

Example support is provided at Applicant's FIG. 1, and at paragraphs [0007] and [0008] of the Specification.

The combined disclosures of Pritchard and Kwon do not teach or suggest any structure that meets this recitation. Pritchard teaches forming bridges by stamping

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bridges connecting spaced, separate structure of the carrier. Pritchard's bridges do not meet the claim 16 language of "a pedestal base junction extending along a closed path on the device plane." Likewise, Pritchard's bridges do not meet the claim 16 recitation of "the sidewall being continuous, at all points of the pedestal base junction, from the pedestal base junction to the pedestal top surface."

Pritchard's disclosed structure requires, and embodies, an extreme deformation of the carrier that creates an inherently discontinuous pair of separate base "junctions," and a similarly discontinuous pair of opposing, separate "sidewalls."

Pritchard's structure not only fails to meet the claim 16 language; it also exemplifies a structure described by the Applicant's Specification as a form that the continuous sidewall aspect of claim 16 is intended to avoid. See, for example, Specification at paragraphs [0007] – [0008].

Kwon teaches nothing of any raised structure, and therefore cannot cure the deficiency of Pritchard, as compared to the currently amended claim 16.

Applicant respectfully submits that claim 16, as currently amended, is allowable over the combination of Pritchard and Kwon, for at least the reasons presented above. Accordingly, withdrawal of the rejections is respectfully requested.

Claim 17, as amended, recites a combination of features having, among other elements, the above-described features of claim 16, namely stamped pedestals having a closed sidewall structure. Therefore, claim 17 should also be considered to be allowable over the cited art, at least for the reasons recited above.

New independent claim 32 should also be considered allowable at least for the following reasons. In the Office Action of November 24, 2009 the Examiner's stated

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basis for the rejection of then-pending claim 14 includes a statement that Pritchard teaches "stamped pedestals hav[ing] a height the same as the semiconductor die." Office Action at p. 12. See also, Examiner's Answer at p. 13. Applicant agrees, but only in part, because the statement is not complete. Pritchard, in fact, teaches a range for the height of its stamped pedestals, and teaches that the absolute lower bound for this range is the pedestals being the same height as the semiconductor. Stated more specifically, Pritchard teaches that pedestals must be "at the height of or slightly higher than top 11a of the die 11," so that "[bond] wires 14 and 15 will not sag and contact the die at an undesirable location." Id., at col. 2, lines 15-18. Pritchard's Summary states this in plain terms, by reciting that the bond area (i.e., the top of the pedestal) "is above the die surface." Id., at col. 1, lines 37-39. Even Pritchard's broadest claim recites that the bond area (top) of the pedestal is higher than the top of the semiconductor. Id., at claim 1, lines 5-7.

New claim 32 defines a structure that, as described in the instant specification, reduces thermal stress at bond points, and hence provides improved reliability, with a pedestal structure that, according to the broadest reasonable meaning of the claim's language, is directly opposite the teaching of Pritchard – which is the reference the Examiner relies upon as a teaching of pedestals. Thus, the combined disclosures of Pritchard and Kwon are not obvious in view of the features of new claim 32.

The dependent claims should be considered to be allowable at least for depending from an allowable base claim.

Accordingly, withdrawal of the rejection is respectfully requested.

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CONCLUSION

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Martin R. Geissler, Applicant's Attorney at 1.703.621.7140 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-3828 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,



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